

### ABSTRACT OF THE DISCLOSURE

An apparatus may include an orthogonal frequency division multiplexing (OFDM) physical layer interface. An adaptive subcarrier demodulator or an adaptive subcarrier modulator may be coupled to the OFDM physical layer interface to implement adaptive bit loading (ABL). A decoder or an encoder may be coupled to the adaptive subcarrier demodulator or to the adaptive subcarrier modulator to implement low density parity checking.